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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/680,783	10/06/2003	William Dale Jones	SSI-04001	5859

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EXAMINER
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LUND, JEFFRIE ROBERT

ART UNIT	PAPER NUMBER
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1763

DATE MAILED: 01/30/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/680,783	<b>Applicant(s)</b> JONES, WILLIAM DALE	
	<b>Examiner</b> Jeffrie R. Lund	<b>Art Unit</b> 1763	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 07 November 2005.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) 11-16 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-10 and 17-22 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 28 March 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>10/05, 12/05</u> . | 6) <input type="checkbox"/> Other: _____  |

**DETAILED ACTION**

***Election/Restrictions***

1. Applicant's election without traverse of claims 1-10 in the reply filed on November 11, 2005 is acknowledged.

***Claim Rejections - 35 USC § 112***

2. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

3. Claims 1-10 and 17-21 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. The new limitation "maintaining within a selected range a difference between a sealing force and a force generated within the processing volume" added to claims 1 and 10 is not supported in the text in such a manner to enable one of ordinary skill in the art to determine what the "selected range" is from the specification.

***Claim Rejections - 35 USC § 102***

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

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(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5. Claims 1-3, 5-10, and 17-22 are rejected under 35 U.S.C. 102(e) as being anticipated by Biberger et al, US Patent 6,921,456 B2.

Biberger et al teaches a supercritical CO<sub>2</sub> processing apparatus that includes: an upper element 42, 46; a lower element 34 which is configured to be brought together with the upper element to form a processing chamber 44; and a hydraulic piston seal energizer 54 controlled by a controller configured to maintain the upper element against the lower element to maintain the processing volume and to control the sealing pressure that varies non-linearly with the processing pressure within the processing chamber. The controller controls the processing volume by maintaining the sealing force higher than the force generated by the processing volume (i.e. the selected range is any sealing force that is greater than the force generated by processing volume). The seal energizer maintains the net force in accordance with the formula  $P1 \cdot A1 - P2 \cdot A2$ , and maintains the  $P1 - P2$  as a constant.  $A1$  is greater than  $A2$ . (Entire document, specifically, Figure 3) The Examiner notes that the non-linear relationship between the sealing pressure and processing pressure is inherent in the structure of the lower element and the seal energizer.

6. Claims 1-3, 5, 6, 8, and 10 are rejected under 35 U.S.C. 102(b) as being anticipated by Fahringer US Patent 2,873,597.

Fahringer teaches supercritical apparatus for processing an article, comprising:

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an upper element 14; a lower element 10 wherein the upper element and the lower element are brought together to form a processing volume; a means for sealing (30, 31) wherein the means for sealing couples the upper element to the lower element to maintain the processing volume by generating a sealing force in a seal-energizing cavity (40) to counterbalance a processing force generated within the processing volume: and a seal energizer 43, which intensifies a first pressure to produce a sealing pressure larger than the first pressure, the sealing pressure used to generate the sealing force. The seal energizer maintains the net force in accordance with the formula  $P1 \cdot A1 - P2 \cdot A2$ , and maintains the  $P1 - P2$  as a constant. (Entire document) The Examiner notes that the non-linear relationship between the sealing pressure and processing pressure is inherent in the structure of the sealing means of Fahringer.

### ***Double Patenting***

7. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

8. Claims 1-10 and 17-22 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-12

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and 24 of copending Application No. 10/364,284 ('284). Although the conflicting claims are not identical, they are not patentably distinct from each other because the claims of '284 teach all the claimed elements of the present invention. The selected range is the minimum pressure or more needed maintain the processing volume.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

### ***Response to Arguments***

9. Applicant's arguments, see page 7 last full paragraph, filed November 7, 2005, with respect to the rejection of claim 4 in view of Fahringer have been fully considered and are persuasive. The rejection of claim 4 in view of Fahringer has been withdrawn.

10. Applicant's arguments filed November 7, 2005 have been fully considered but they are not persuasive.

In regard to the argument that Biberger et al, Fahringer, or copending application 10/364,284 ('284) does not teach, "maintaining within a selected range a difference between a force generated within the wafer cavity and a force that maintains the wafer cavity", the Examiner disagrees. The new limitation is extremely broad and does not really limit the apparatus because in order to function the apparatus must have some difference in force, and thus a range, to maintain the wafer cavity. Biberger et al, Fahringer, and '284 all require that the force maintaining the wafer cavity be greater than the force generated by the wafer cavity. If this difference in force is not maintained, the wafer cavity will fail. The difference between the minimum force needed to maintain the wafer cavity against the force generated by the wafer cavity and the total sealing

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force generated forms the claimed range. Thus, Biberger et al, Fahringer, and '284 all teach the claim limitation.

The Examiner notes that pressure and force are directly related, specifically, the force equals the pressure times the area upon which the pressure acts ( $F=P*A$ ). Since the area (A) is constant in each apparatus, a specific pressure differential will result in a specific force differential.

### ***Conclusion***

11. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

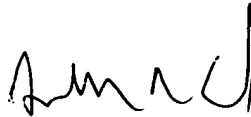
A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jeffrie R. Lund whose telephone number is (571) 272-1437. The examiner can normally be reached on Monday-Thursday (6:30 am-6:00pm).

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Parviz Hassanzadeh can be reached on (571) 272-1435. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Jeffrie R. Lund  
Primary Examiner  
Art Unit 1763

JRL  
1/24/06